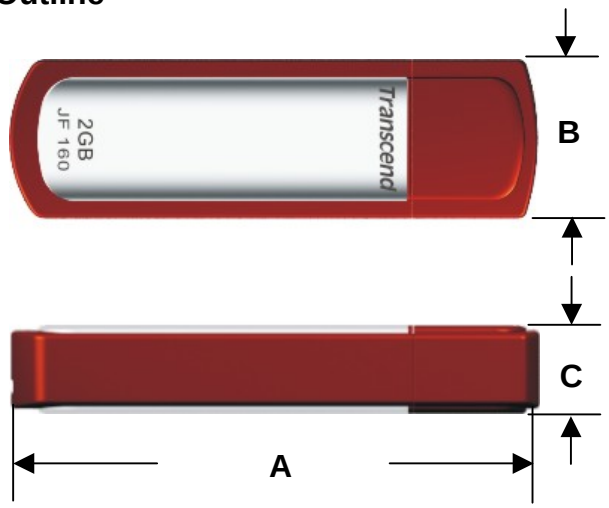
# TS2GJF160

**2GB USB2.0 JetFlash™**

## Description

TS2GJF160 is a 2GB USB Flash Drive with 1 pcs of 2Gx8 Flash (or 2 pcs of 1Gx8) Memory assembled on a printed circuit board.

## Outline




## Features

- Color: Red
- USB 2.0 compatible, true Plug and Play
- Powered directly via the USB port. No external power or battery needed
- PC-Lock Function: Makes JetFlash160 the key to your computer
- Partition & Security Function: Partition JetFlash160 and create a private partition with password protection
- Boot-Up Function: Makes JetFlash160 a bootable device
- LED indicates the usage status of JetFlash160

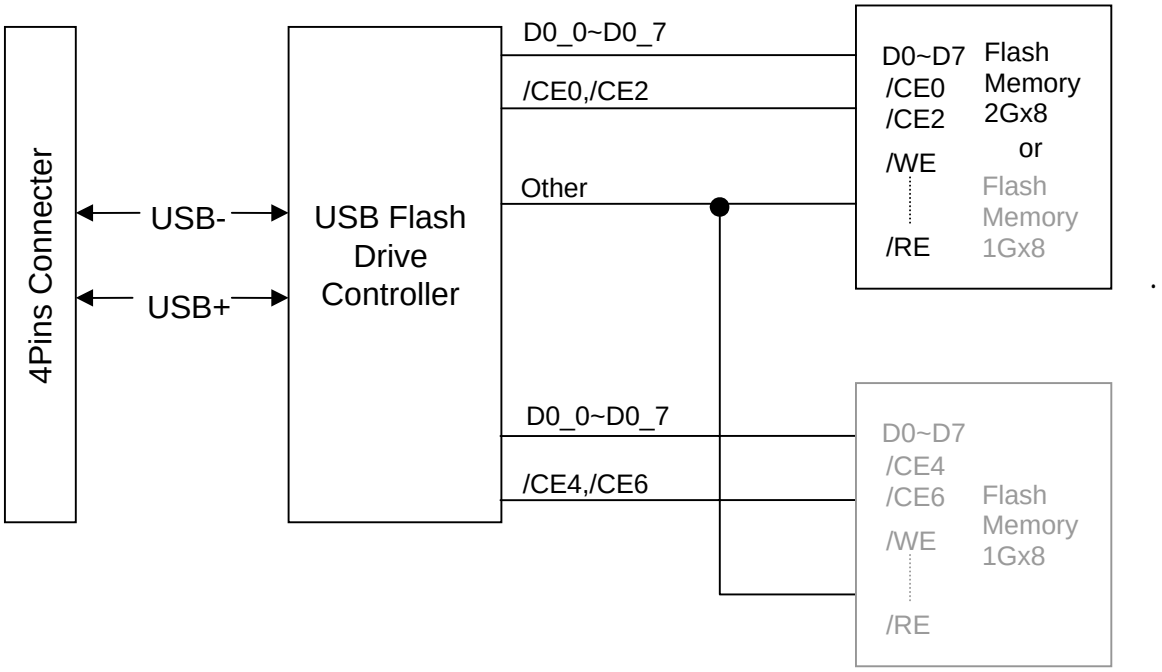
## System Requirement

- Hardware: Desktop or notebook computer with USB port
- Operating System: Windows® 98SE, Windows® Me, Windows® 2000, Windows® XP and Mac™ OS 9.0 or later, Linux™ Kernel 2.4.2 or later

## Dimensions

| Side | Millimeters | Inches |
|---|---|---|
| A | 61 ± 1.00 | 2.40 ± 0.04 |
| B | 18.6 ± 1.00 | 0.73 ± 0.04 |
| C | 9.8 ± 1.00 | 0.39 ± 0.04 |

**Block Diagram**



## Pinouts

| Pin No. | Pin Name |
|---|---|
| 01 | VCC |
| 02 | USB- |
| 03 | USB+ |
| 04 | VSS |

## Pin Identification

| Symbol | Function |
|---|---|
| USB- | USB differential signal: |
| USB+ | The pairs are used to transmit Data/Address/Command |
| VSS | Ground |
| VCC | USB power input |

## Specifications

| | |
|---|---|
| Storage Capacity | 2GB |
| Data Retention | 10 years |
| Erase Cycles | >100,000 times |
| Connector Durability | 10,000 times |
| System Performance | Read: 12MB/sec (max.), Write: 8MB/sec (max.) |
| Power Supply | DC 5V±10% via the USB port |
| Temperature Range | Operation: 0-70°C, Non-Operating: -40°C-85°C |
| Weight | 10g |
| Certificates | CE, FCC, BSMI |

## Absolute Maximum Ratings

| Symbol | Parameter | Rating | Unit |
|---|---|---|---|
| $V_{CC}$ | Power Supply | 4.5 to 5.5 | V |
| $V_{IN}$ | Input Voltage | -0.3 to 3.6 | V |
| $V_{CC18}$ | Internal Power Supply | -0.3 to 2.0 | V |

## DC Characteristics: $T_{OPR}$=0℃~70℃；$V_{IN}$=3.3V；$V_{CC18}$=1.8V

| Symbol | Parameter | Min. | Max. | Units |
|---|---|---|---|---|
| $V_{IH\ TTL}$ | TTL Input High Voltage | 2 | $V_{IN}$+0.3 | V |
| $V_{IL\ TTL}$ | TTL Input Low Voltage | -0.3 | 0.8 | V |
| $V_{OH\ TTL}$ | TTL Output High Voltage | $0.9V_{IN}$ | | V |
| $V_{OL\ TTL}$ | TTL Output Low Voltage | | 0.45 | V |
| $I_{OH\ TTL}$ | TTL Output High Current | -4 | | V |
| $I_{OL\ TTL}$ | TTL Output Low Current | | 4 | V |
| $V_{IH_USB}$ | USB Input High Voltage for Low-/full-speed | 2.0 | | V |
| $V_{IIL_USB}$ | USB Input Low Voltage for Low-/full-speed | | 0.8 | V |
| $V_{I_USB_DIFF}$ | Differential Input Sensitivity for Low-/full-speed | TBD | | V |
| $V_{I_USB_CM}$ | Differential Common Mode Input Range for Low-/full-speed | 0.8 | 2.5 | V |
| $V_{I_USB_HSSQ}$ | USB High-speed squelch Input detection threshold | 0.1 | 0.15 | V |
| $V_{I_USB_HSDSC}$ | USB High-speed disconnect Input detection threshold | 0.525 | 0.625 | V |
| $V_{I_USB_HSCM}$ | USB High-speed Signaling Common Mode Range | -0.05 | 0.5 | V |
| $V_{OH_USB}$ | USB Output High Voltage for Low-/full-speed | 2.8 | 3.6 | V |
| $V_{OL_USB}$ | USB Output Low Voltage for Low-/full-speed | 0 | 0.3 | V |
| $V_{OH_USB_HS}$ | USB Output High Voltage for High-speed | 0.36 | 0.44 | V |
| $V_{OL_USB_HS}$ | USB Output Low Voltage for High-speed | -0.01 | 0.01 | V |
| $I_{OH_USB}$ | USB Output High Current for Low-/full-speed | -10 | | V |
| $I_{OL_USB}$ | USB Output Low Current for Low-/full-speed | | 10 | V |
| $I_{OH_USB_HS}$ | USB Output High Current for High-speed | 40 | | V |
| $I_{OL_USB_HS}$ | USB Output Low Current for High-speed | | 40 | V |

## AC Characteristics:

| Symbol | Parameter | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|
| $TP_{ILH}$ | Input Rising Delay | 0.61 (0.8pF) | 0.72 (2.4pF) | 0.92 (4.8pF) | ns |
| $TP_{IHL}$ | Input Falling Delay | 0.88 (0.8pF) | 1.03 (2.4pF) | 1.24 (4.8pF) | ns |
| $TP_{OLH}$ | Output Rising Delay | 2.40 (10pF) | 3.42 (30pF) | 4.88 C | ns |
| $TP_{OHL}$ | Output Falling Delay | 2.61 (10pF) | 3.62 (30pF) | 5.03 (30pF) | ns |
| TR | Output Rising Time | 2.26 (10pF) | 4.45 (30pF) | 7.89 (30pF) | ns |
| TF | Output Falling Time | 1.90 (10pF) | 3.63 (30pF) | 6.23 (30pF) | ns |

## Recommended Operating Conditions

| Symbol | Parameter | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|
| $V_{CC}$ | Power Supply Voltage | 4.5 | 5 | 5.5 | V |
| $V_{IN}$ | Input Voltage | 3.0 | 3.3 | 3.6 | V |
| $V_{CC18}$ | Internal Power Supply | 1.62 | 1.8 | 1.98 | V |

Above technical information is based on industry standard data and tested to be reliable. However, Transcend makes no warranty, either expressed or implied, as to its accuracy and assumes no liability in connection with the use of this product. Transcend reserves the right to make changes in specifications at any time without prior notice.